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# HOW TO

## Attract Cavity-nesting Birds to Your Woodlot



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North Central Forest Experiment Station  
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# How to Attract Cavity-nesting Birds to Your Woodlot

The advantage of owning a woodlot is that with a little care it can produce many desirable things for you—shade, firewood, spring flowers, timber, solitude, and animals—including birds.

Many of the birds that like forests do so because holes in trees offer them nesting places in summer, shelter in winter, and food. In fact, about 45 different species of cavity-nesting birds live in the forests of eastern North America. Ten representative birds, their size, habitats, and the size trees or boxes they use are shown in the accompanying table.

## **Insect Eaters**

The surface of trees in which these birds feed provides all sorts of nooks and crannies for spiders, ants, moths, and other small creatures. And as a tree dies it is invaded by still other kinds of insects like bark beetles, carpenter ants, and termites. So it's natural that most hole-nesting birds eat insects; some may even help to control insect outbreaks that sometimes damage timber trees.

## **Many Potential Homes**

Normally there are more than enough dead and dying trees in an unaltered forest to shelter a good population of hole-nesters. In fact, about 90 percent of the trees in a 20-year-old upland hardwood stand will die in the next 60 years, and many of these will provide holes for birds. Virtually all will provide feeding areas for birds and other animals. Even if your prime object is growing timber, you can attract cavity nesters if you leave some dead and dying trees for them.

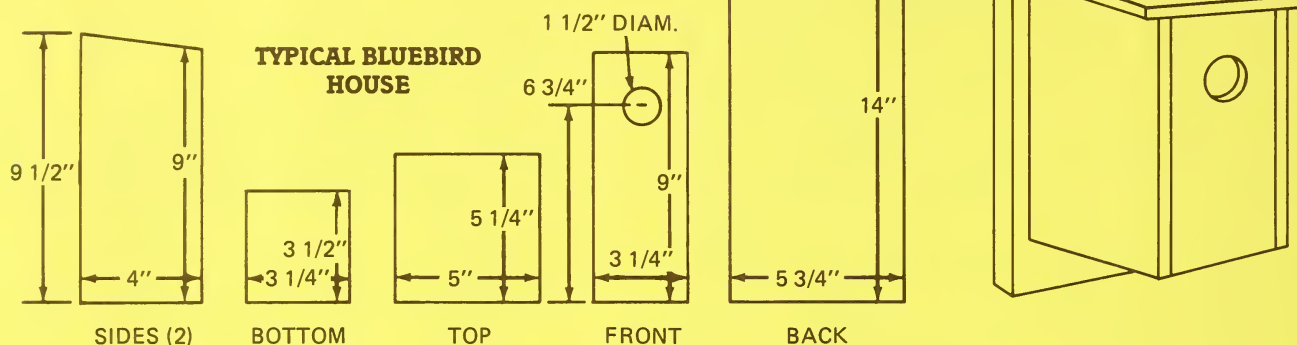
## **Culls and Snags are for the Birds**

Generally, the bigger the snag (standing dead tree) the greater its value to birds. Large snags provide more area for excavating and feeding, often providing holes for several species. The best ones—large old den trees—are often over 100 years old, rotten in the center, with sound sapwood on the outside, and a few limbs or live branches still hanging on. Also high in demand are living trees with holes, because they are particularly resistant to predators and weather.

There are several ways to tell if a snag might have potential nest sites. Look for rotting branch stubs, conks or fruiting bodies of fungi, and old wounds and scars. All indicate that cavities probably exist. If woodpecker holes are already present, other sites are probably suitable for holes, too.

Woodpeckers do the heavy construction for most cavity nesters. They drill or hollow out space for nesting

and roosting. The rest of the cavity nesters move into surplus holes made by woodpeckers, or into holes made by the natural processes of decay, insects, fire, or breakage.



### TEN HOLE-NESTERS OF EASTERN WOODLOTS

Species	Length Inches	Excavator	Secondary user	Optimum diameter for snag Inches	Hole diameter Inches	Length	Box Size Width Inches	Height Inches	Height above ground Feet	Habitat
Pileated Woodpecker	15	X		20	4	—	—	—	—	Old growth; large trees; extensive forests
Screech owl	8		X	12	3	8	8	12	10-30	Open forest; meadow edges; orchards
Common Flicker	10	X		12	2 3/4	7	7	16	6-20	Large trees; open woodlands; forest edges; farm yards
Red-bellied Woodpecker	8	X		12	2 1/4	—	—	—	—	Forest interior; wooded suburbs to a lesser extent
Red-headed Woodpecker	7	X		20	2	6	6	12	6-20	Forest edges, particularly where snags are abundant
Great Crested Flycatcher	7		X	12	2	6	6	10	6-20	Forest interior; edges to a lesser extent
Eastern Bluebird	5		X	8	1 1/2	5	5	8	5-10	Forest-field edge or savanna—like habitats
Downy Woodpecker	6	X		12	1 1/4	4	4	10	6-20	Dense young forests
Tufted Titmouse	5		X	12	1 1/4	4	4	10	6-20	Deciduous forests; suburbia
Black-capped and Carolina Chickadee	4		X	4	1 1/4	4	4	10	6-20	Almost any kind of forest

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### Steps to Take

1. Save old, large trees, especially those with old wounds and broken limbs. These are most valuable to cavity nesters.
2. Do not remove all dead, dying, and decayed trees for timber and firewood.
3. Over the years try to achieve the following optimum number of snags per each 20 acres of woodlot:
  - 4 to 5 snags over 18 inches dbh
  - 30 to 40 snags over 14 inches dbh
  - 50 to 60 snags over 6 inches dbh.
4. Create cavities in trees by selecting a limb at least 3 inches in diameter and pruning it off about 6 inches from the trunk. Over the years this will form a natural cavity. Elm, ash, sycamore, mulberry, and basswood are especially prone to form natural cavities.
5. Create snags by girdling and thus killing a few trees over 12 inches in diameter annually. Girdle by removing a 3- to 4-inch-wide belt of outer bark and inner bark (cambium) around the tree. Select crooked or scarred



trees or species of low value if timber production is also a management objective.

6. Provide artificial nest boxes of various dimensions (see table and figure) for different cavity nesters.

7. Bore holes at least 2 inches in diameter to the center of living trees of appropriate sizes (see table) for various cavity nesters. Try to drill the holes just under a limb 3 inches or larger in diameter. The holes will eventually enlarge by rotting and provide cavities.

## Technical References

Evans, Keith E., and Richard N. Conner.

1979. **Snag Management.** In Management of north central and northeastern forests for nongame birds. U.S. Department of Agriculture-Forest Service, General Technical Report NC-51. p. 214-225. U.S. Department of Agriculture-Forest Service, North Central Forest Experiment Station, St. Paul, Minnesota.

Hardin, Kimberly I., and Keith E. Evans.

1977. **Cavity nesting bird habitat in the oak-hickory forests—a review.** U.S. Department of Agriculture-Forest Service, General Technical Report NC-30, 23 p. U.S. Department of Agriculture-Forest Service, North Central Forest Experiment Station, St. Paul, Minnesota.

Scott, Virgil E., Keith E. Evans, David R. Patton, and Charles P. Stone.

1977. **Cavity-nesting birds of North American forests.** U.S. Department of Agriculture-Forest Service, Agriculture Handbook 511, 112 p. United States Forest Service, Washington, D.C.

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